

## **LISTING OF THE CLAIMS**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1-25 (Canceled)

26. (New) A process for the manufacture of an alkaloid reaction product comprising at least one alkaloid derivative having a quaternary nitrogen, the process comprising:

- a) providing a reaction mixture comprising an organic solvent, at least one alkaloid present in the herb *Chelidonium majus L.*, and an alkylating agent, and carrying out an alkylation reaction by reacting the at least one alkaloid with the alkylating agent in the presence of the organic solvent, so as to form at least one alkaloid derivative having a quaternary nitrogen;
- b) after termination of the alkylation reaction, subjecting the resulting reaction mixture to at least one washing step with an aqueous solvent or water, to remove water-soluble compounds present in the reaction mixture; and
- c) subjecting the washed reaction mixture to a treatment with a strong acid in gaseous or liquid form, thereby converting at least one quaternary alkaloid derivative in the reaction mixture into a water soluble form.

27. (New) The process according to claim 26, wherein the at least one alkaloid is selected from the group consisting of chelidonine, protopine, stylophine, allocryptopine, homochelidonine, chelamidine, chelamine, L-sparteine and oxychelidonine.

28. (New) The process according to claim 26, wherein in step c) the washed reaction mixture is subjected to a treatment with gaseous hydrogen chloride or a hydrogen chloride solution.

29. (New) The process according to claim 26, wherein in step c) at least one quaternary alkaloid derivative is converted into a water-soluble salt.

30. (New) The process according to claim 26, wherein in step c) a reaction product precipitates during or after the treatment with acid, whereafter the precipitate is separated from the organic solvent, and optionally further purified using organic solvents.

31. (New) The process according to claim 26, wherein the alkylation reaction is carried out at elevated temperature.

32. (New) The process according to claim 31, wherein the alkylation reaction is carried out at the boiling point of the solvent.
33. (New) The process according to claim 26, wherein a mixture of several or all alkaloids of *Chelidonium majus L.* is used as an alkaloid source.
34. (New) The process according to claim 26, wherein chelidonine, oxychelidonine, or methoxychelidonine is applied as a sole alkaloid source.
35. (New) The process according to claim 26, wherein the alkylating agent is a physiologically active agent.
36. (New) The process according to claim 35, wherein the alkylating agent is a cytotoxic agent.
37. (New) The process according to claim 26, wherein the alkylating agent is water-soluble or decomposes into water-soluble components upon contact with water.
38. (New) The process according to claim 26, wherein the organic solvent is selected from the group consisting of monochloromethane, dichloromethane, trichloromethane, monochloroethane, dichloroethane and trichloroethane.
39. (New) The process according to claim 26, wherein the alkylating agent is tris(1-aziridinyl)phosphine sulphide (CAS 52-24-4).
40. (New) The process according to claim 26, wherein said alkaloid derivative has a quaternary nitrogen atom to which, as a fourth ligand, a hydrogen residue or a residue originating from the alkylating agent is bound.
41. (New) The process according to claim 40, wherein the residue is selected from the group consisting of a methyl, an ethyl and a tris(1-aziridinyl)phosphine sulphide residue.
42. (New) The process according to claim 26, wherein said alkaloid derivative has a quaternary nitrogen atom and, as a fourth ligand of said nitrogen, a decomposition product formed due to the treatment with acid.

43. (New) An alkaloid reaction product comprising at least one alkaloid derivative other than sanguinarine and M-methylprotopine chloride, the derivative having a quaternary nitrogen and the alkaloid being selected from the group of alkaloids present in the herb *Chelidonium majus L.*, for use as a drug or medicament.

44. (New) The alkaloid reaction product according to claim 43, wherein the alkaloid is selected from the group consisting of chelidonine, protopine, stylophine, allocryptopine, homochelidonine, chelamidine, chelamine, L-sparteine and oxychelidonine.

45. (New) The alkaloid reaction product according to claim 43, obtained by a process comprising:

- a) providing a reaction mixture comprising an organic solvent, at least one alkaloid present in the herb *Chelidonium majus L.*, and an alkylating agent, and carrying out an alkylation reaction by reacting the at least one alkaloid with the alkylating agent in the presence of the organic solvent, so as to form at least one alkaloid derivative having a quaternary nitrogen;
- b) after termination of the alkylation reaction, subjecting the resulting reaction mixture to at least one washing step with an aqueous solvent or water, to remove water-soluble compounds present in the reaction mixture; and
- c) subjecting the washed reaction mixture to a treatment with a strong acid in gaseous or liquid form, thereby converting at least one quaternary alkaloid derivative in the reaction mixture into a water soluble form

46. (New) The alkaloid reaction product according to claim 45, obtained through reaction of one or more alkaloids with an alkylating agent, wherein in the product an initially tertiary nitrogen is present in quaternary form to which, as a fourth ligand, a hydrogen residue or a residue originating from the alkylating agent is bound.

47. (New) The alkaloid reaction product according to claim 46, wherein the residue is selected from the group consisting of a methyl, an ethyl, and tris(1-aziridiny)phosphine sulphide residue, or from tris(1-aziridiny)phosphine sulphide.

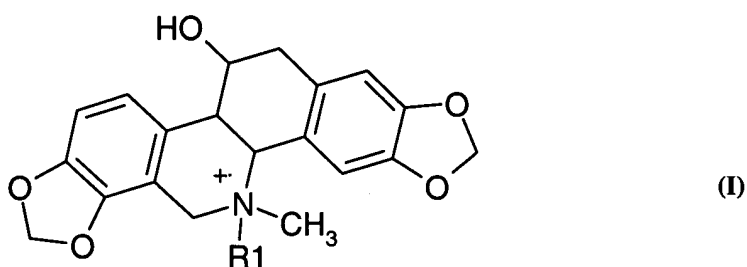
48. (New) The alkaloid reaction product according to claim 45, wherein at least one alkaloid derivative is present in the form of a water-soluble salt.

49. (New) The alkaloid reaction product according to claim 48, wherein at least one alkaloid derivative is present in the form of a hydrochloride.

50. (New) The alkaloid reaction product according to claim 45, wherein chelidonine, oxychelidonine, or methoxychelidonine is present as a sole alkaloid source.

51. (New) The alkaloid reaction product according to claim 45, wherein the product further comprises at least one compound selected from the group consisting of unreacted tertiary alkaloids, unreacted alkylating agent, and decomposition products of the alkylating agent.

52. (New) A chelidonine derivative, wherein the naturally occurring chelidonine is present in a quaternated form according to formula (I),



wherein as a fourth ligand R1 to the quaternary nitrogen a hydrogen or a methyl or ethyl residue is present, wherein the derivative is useful as a drug or a medicament.

53. (New) The chelidonine derivative according to claim 52 in water soluble form.

54. (New) The chelidonine derivative according to claim 53 in the form of a salt of a strong acid.

55. (New) The chelidonine derivative according to claim 53 in the form of a hydrochloride.

56. (New) The chelidonine derivative according to claim 52, which is characterized by the NMR spectrum in Fig.4, the UV spectrum in Fig.5, the mass spectrum in Figures 7 and 8, and the elementary analysis in Table 1.

57. (New) A method of manufacture of a pharmaceutical composition for the prophylaxis or treatment of a disease or bodily condition selected from the group consisting of viral infection, cancer, immunological dysfunction, metabolic dysfunction and radiation damage, wherein the

method comprises adding to said composition an alkaloid reaction product, comprising at least one alkaloid derivative other than sanguinarine and M-methylprotopine chloride, the derivative having a quaternary nitrogen and the alkaloid being selected from the group of alkaloids present in the herb *Chelidonium majus* L..

58. (New) The method according to claim 57, wherein the alkaloid is selected from the group consisting of chelidonine, protopine, stylophine, allocryptopine, homochelidonine, chelamidine, chelamine, L-sparteine and oxychelidonine.

59. (New) The method according to claim 57, wherein the disease is selected from the group consisting of allergies, osteoporosis, skin tumours, influenza virus infections, rheumatic diseases, scars, postoperative wounds, epilepsy and multiple sclerosis.

60. (New) The method according to claim 57, wherein the sole alkaloid is chelidonine and the alkaloid reaction product is characterized by the NMR spectrum in Fig.4, the UV spectrum in Fig.5, the mass spectrum in Figures 7 and 8, and the elementary analysis in Table 1.

61. (New) A method of manufacture of a pharmaceutical composition for the prophylaxis or treatment of a disease or bodily condition selected from the group consisting of viral infection, cancer, immunological dysfunction, metabolic dysfunction and radiation damage, wherein the method comprises the addition of the chelidonine derivative of claim 52 to said composition.

62. (New) The method according to claim 61, wherein the disease is selected from the group consisting of allergies, osteoporosis, skin tumours, influenza virus infections, rheumatic diseases, scars, postoperative wounds, epilepsy and multiple sclerosis.